

Nigeria Data Center Cooling - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2024 - 2030)

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Abstracts

The Nigeria Data Center Cooling Market size is estimated at USD 3.85 million in 2024, and is expected to reach USD 12.25 million by 2030, growing at a CAGR of 20.30% during the forecast period (2024-2030).

Key Highlights

The increasing demand for cloud computing among SMEs, government regulations for local data security, and growing investment by domestic players are major factors driving the demand for data centers.

Under Construction IT Load Capacity: The upcoming IT load capacity of the Nigeria data center market is expected to reach more than 226.7 MW by 2029.

Under Construction Raised Floor Space: The country's construction of raised floor area is expected to increase above 0.6 million sq. ft by 2029.

Planned Racks: The country's total number of racks to be installed is expected to reach above 32,389 units by 2029. Johannesburg is expected to house the maximum number of racks by 2029.

Planned Submarine Cables: Many are under construction. 2Africa, which stretches over 45,000 kilometers and has landing points in Lagos, Nigeria, was estimated to start service in 2023.

New data centers across the country are focusing on implementing state-of-the-art

monitoring systems to mitigate the risks associated with extreme weather events. Many would use the latest, more energy-efficient cooling technologies, such as redundant cooling systems, smart monitoring technologies, and backup power generators, to ensure consistency of temperature in the event of power interruptions. Another example is direct liquid cooling, which uses a higher thermal transfer of water to a more efficient cooling device.

The average winter temperature is between 32°C (90°F) and 34°C (94 °F). The average summer temperature is between 42.9°C (109.22 °F) to over 44.5 °C (112.1°F). Depending upon climatic conditions, the DC cooling is done in the DC facilities.

Nigeria Data Center Cooling Market Trends

The IT & Telecom Segment to Have Significant Market Share

The cloud industry utilized data centers through an IT load capacity of 8.11 MW in 2023, and the capacity is expected to reach 46.22 MW in 2029, registering a CAGR of 28.23%. Cloud computing plays a vital role in digitalizing the operations of organizations of various sizes in Nigeria.

Cloud service providers need to increase their capacities to serve Nigeria's rising demand. Data center and colocation services offer the right solutions to enhance cloud capabilities. The availability of hyperscale Tier 3 facilities in the country is expected to attract more organizations that want to leverage their systems for specialized deployment. Several new launches are shaping the ecosystem.

The government segment is expected to record the highest growth in utilizing the IT load capacity, from 1.07 MW in 2023 to 10.67 MW in 2029, registering a CAGR of 38.95%. Despite significant investments in the data center and data hosting solutions in Nigeria, the majority of the departments host the data abroad, which affects internal revenue generation. With the increased focus on cloud deployment, the NITDA and NCC are emphasizing local cloud and data hosting, which will help the segment register significant growth in the utilization of the facilities in Nigeria.

The government also partners with cloud service providers like Microsoft to drive digitalization through upskilling programs, addressing the region's need for more skilled personnel for a long-term positive impact on the market's growth.

As network connectivity evolves, other end users, such as e-commerce and BFSI, are contributing significantly through new cloud portals that utilize data centers.

Liquid Cooling to Have Significant Share in the Market

Liquid cooling offers many benefits in data centers, making it an attractive option for cooling computing environments with high performance. It is more energy-efficient than conventional air conditioning. By providing precise temperature control, it reduces the need for overcooling and improves data center energy efficiency.

Technological advances have helped to reduce the data center's water consumption by more than 15% in tropical climates and 80% in green areas, making liquid cooling easier to maintain, scale up, or affordable. Energy used for liquid cooling may be recycled to heat buildings and drinking water, while advanced artificial refrigerants can significantly reduce the carbon footprint of air conditioners.

Liquid cooling takes advantage of the space constraints and superior heat transfer properties of water or other liquids to provide efficient and cost-effective cooling of high-density racks up to 3,000 times more efficiently than air. Long proven in mainframe and gaming applications, liquid cooling is increasingly being used to protect rack servers in regional data centers. Vertiv introduced the Liebert XDU, a water-efficient liquid cooling solution for high-density data centers, a new generation of thermal management systems that supports liquid-cooled servers and enables the control of liquid quality, flow, and pressure.

Lagos is a prominent and strategically favorable location for data center facilities in Nigeria. The region houses the majority of service providers from several end users, generating the required demand for market growth.

The region utilized an IT load capacity of 40.06 MW in 2023 to reach 203.06 MW by 2029 at a CAGR of 26.09%. Lagos is the only landing point for 9 submarine cables incoming to Nigeria. As a result, internet exchanges and other benefits of advanced network infrastructure facilitate internet connectivity.

Lagos incorporates trade-free zones like the Lekki Free Zone, which offers several business benefits for the data center industry and organizations with their facilities located in the region. The location of the free zone also attracts other companies to

business opportunities, making the region the ideal location to address rising demand.

Nigeria Data Center Cooling Industry Overview

The Nigerian data center cooling market is fragmented. The benefits offered by the technology and support from the government by imposing efficiency regulations on data centers are expected to help the market grow directly. Market penetration is growing with a strong presence of major players such as Schneider Electric SE, Rittal GMBH & Co.KG, Mitsubishi Electric Hydronics & IT Cooling Systems SpA, Johnson Controls International PLC, and Asetek A/S.

In April 2024, Carrier Global Corporation partnered with Strategic Thermal Labs to develop direct-to-chip cooling technology. Under this partnership, Carrier will leverage the advancement in direct-to-chip technology and incorporate it into their data center cooling solutions.

In December 2023, Vertiv acquired Cooltera Ltd, a coolant distribution unit (CDU) and secondary fluid networks (SFN) manufacturer. This acquisition is expected to improve the company's existing DC cooling solutions.

Additional Benefits:

The market estimate (ME) sheet in Excel format

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